

# Energy News

## Energy News Overview

In the last newsletter we hinted at the big changes coming to the electric power industry with the proposed EPA Clean Power Plan Rule (also referred to as the 111d rule). The proposed rule applies to existing power plants and can be seen as the first national attempt to directly regulate greenhouse gas emissions. The recent automotive CAFE and heavy truck standards do regulate GHG emissions, but are highly focused on the cost effectiveness of the standards (lifetime fuel savings versus initial equipment cost). The proposed rule was announced on June 2nd and EPA staff have since been busy soliciting comments and trying to explain how the rule is to work. A small industry of consultants offering to advise clients on the Clean Power Plan has also emerged over the last month. See the proposed rule and numerous fact sheets via the link below, and check out the numerous articles on the subject on page 5 and 6. EPA website <http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule>

The proposed Clean Power Plan Rule is unlike most emission rules that EPA has developed. EPA is proposing a 2030 emission rate target that is unique for each state. To clarify this is an emission rate for the entire state and not a specific power plant or class of plants. The foundation for the target emission rate begins with the 2012 in-state power sector carbon dioxide emissions (tons). In creating the unique state emission rate target EPA then develops what it refers to as building blocks: 1. technically feasible improvements to coal power plant efficiency (for each state), 2. ability to shift generation from coal-fired to natural gas-fired power plants, 3. increase in generation from zero emission resources such as nuclear power and renewable energy (wind, solar, incremental hydro, etc.), and 4. demand side reduction (energy efficiency) programs. Building blocks 1 and 2 reduce the carbon dioxide emission number (expressed as tons or pounds CO<sub>2</sub>), while blocks 3 and 4 increase the denominator of the equation which is expressed in megawatt-hours (MWh). Individual states may alternatively choose a mass based standard (tons per year) instead of the emission rate (lb/MWh) and may create regional compliance groups. A four month rulemaking comment period began in early June, the final rule is due in June of 2015, and states are to submit compliance plans to the EPA two years from now. Compliance is to be phased-in during 2020–29.

Following the EPA formula for Washington state the 2012 baseline emission rate works out to 765 lb/MWh. Our 2030 emission rate target is 215 lb/MWh which is the lowest in the nation and also the largest percentage reduction relative to 2012. Because the Pacific Northwest has few coal plants and exceptional hydropower generation the 2030 emission rate targets for Oregon and Idaho are also low: 372 lb/MWh and 228 lb/MWh respectively. Part of the reason that Washington state's 2030 target is low is because there is already an agreement to phase-out generation at the Centralia Generation Station by 2025 (drastically reducing the numerator in the EPA equation) and because of the renewable energy and efficiency targets set by the Energy Independence Act (increases the denominator of the equation).

In Washington State, Governor Inslee issued a directive to deal with the increasing amount of oil train traffic coursing through the state. The governor asked the Department of Ecology to work with other state agencies, the Federal Railroad Administration and tribal governments to “identify data and information gaps that hinder improvements in public safety and spill prevention and response: article on page 5. The federal government recently compelled railroads to report oil train activity to each state's emergency management division. In related news crude oil production in North Dakota recently exceed one million barrels per day: article on page 5.

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# What's Happening in the Energy Office

## Electric Utility Resource Plans

The Electric Utility Resource Plan reporting effort conducted by Department of Commerce has opened for 2014. The reporting is every two years with the last one in 2012. The legislature enacted the law to identify and develop new energy generation, conservation and efficiency resources, methods for renewables integration, and related electricity infrastructure.

We collect load and resource estimates by fuel and purchase method for a ten year period in five year increments. The estimate starts with base year data for one full year of actual loads and resources. Utilities then project demand and resources outward. Only the core plan information is collected by Commerce, via Excel spreadsheet. Full resource plans do not need to be submitted to Commerce but must be made publicly available. Most utilities meet this requirement by posting online.

Guidance and reporting templates were sent out to Utilities in mid-June and are due September 1, 2014. The reporting template for reporting is available by contacting Angela Burrell at [angela.burrell@commerce.wa.gov](mailto:angela.burrell@commerce.wa.gov). Background, cover sheets and reports from previous years are available on our website at: <http://www.commerce.wa.gov/Programs/Energy/Office/Utilities/Pages/ResourcePlans.aspx>

## Energy Independence Act reports show all utilities met conservation and renewable energy targets

The 17 electric utilities that are subject to the state Energy Independence Act all reported in June that they met or exceeded the law's targets for using energy efficiency and renewable energy in serving their customers. The law requires utilities to use renewable energy for at least 3% of the electricity delivered in 2014 (escalating to 15% in 2020). It also requires that utilities set targets en route to acquiring all cost-effective conservation over 10 years. Utilities with fewer than 25,000 retail customers are exempt from the Energy Independence Act requirements.

Utilities submit annual progress reports to Commerce. In the June 2014 reports, utilities reported conservation achievements that exceeded targets, with the average achievement 27% above target. Almost every utility has set a lower conservation target for the next performance period, which covers 2014-2015.

On the renewable energy side, utilities project that they will use from 3% to 11.5% in serving their retail customers. The state average is 6.5%. The utilities' reported incremental cost of renewables varied widely, from zero to 8.8% of retail revenues. In some cases, the amounts spent are for renewable energy in excess of what the law requires. On average, utilities report spending less than 2% of retail revenue on the incremental cost of renewable energy. See chart at top of page 5.

The 2014 utility reports and related information are available here:  
<http://www.commerce.wa.gov/EIA>

## Carbon Tax Assessment Model (CTAM) Update

In 2011 Keibun Mori, a graduate student at the University of Washington, developed the Carbon Tax Assessment Model (CTAM) for the Dept. of Commerce. CTAM is an open-source price elasticity of demand driven model that quantifies the environmental and fiscal impacts of a carbon tax on each sector of the economy and provides policy insights for Washington State. The user can alter tax start and end levels, ramp rates, start dates, and how the carbon tax revenue will be used to offset existing state taxes. The model has been updated with more current economic and energy forecast information. In addition several optional features in the electric power sector, baseline selection, and road fuel tax rates, have been added to the model to make it more versatile.

CTAM can be found here:  
<http://www.commerce.wa.gov/Programs/Energy/Office/Pages/NewEnergyReports.aspx>

# Electricity, Petroleum & Natural Gas Prices

## Energy Price Overview

By the last week of June the spot price for West Texas Intermediate had increased about three dollars trading at close to \$107 per barrel, which is about twelve dollars more than during the last week of May in 2013. Brent crude oil increased about three dollars during June to \$114 per barrel. Crude oil has seen upward price pressure for several months. One factor causing the price push has been the improving global economy. However, the primary cause of the recent price increase has been the destabilization of Iraq as another Shia—Sunni conflict escalates. Iraq is the second largest oil exporter in OPEC so loss of some or all of its exports could have a profound impact on crude oil prices.

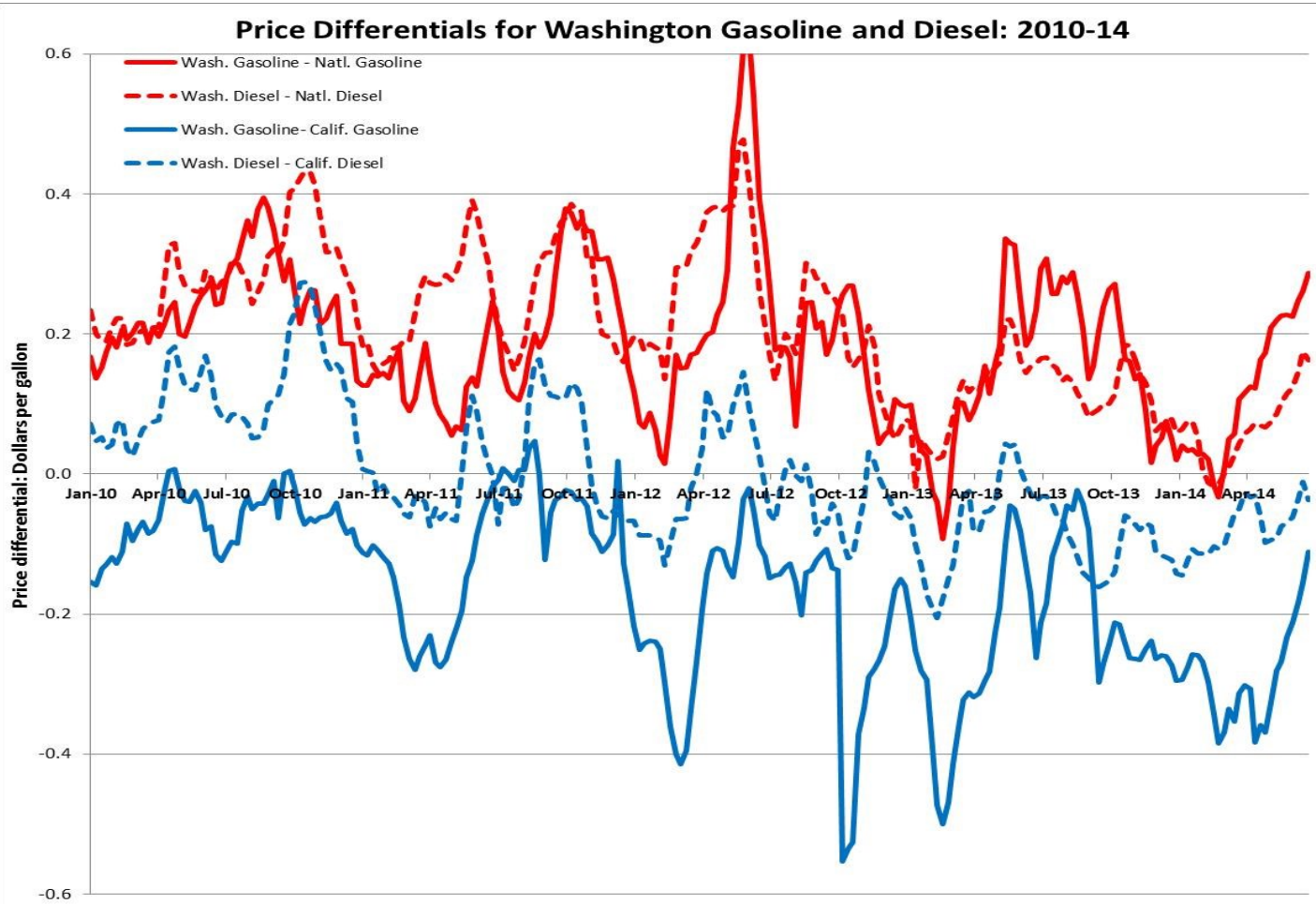
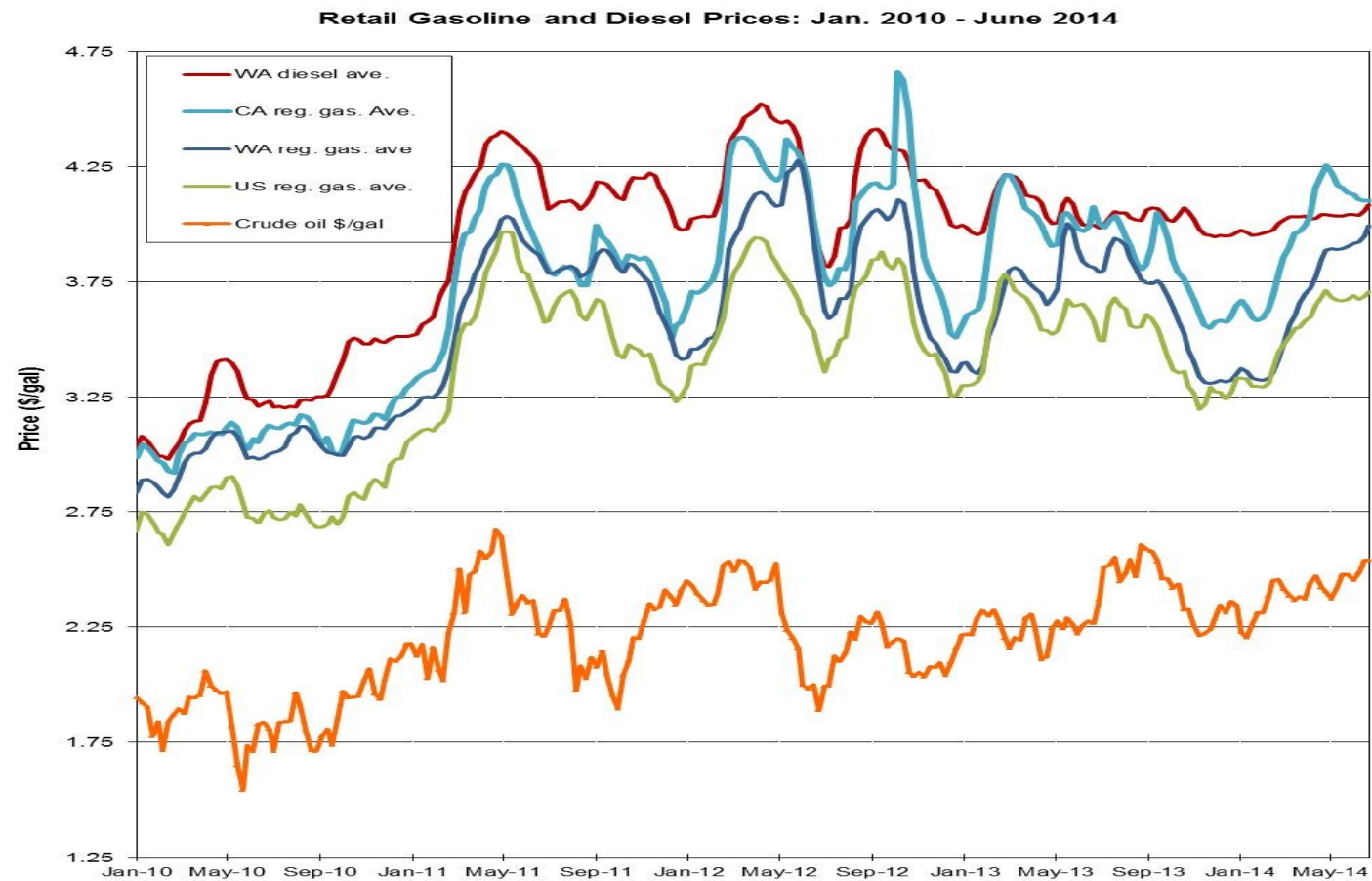
Retail prices for gasoline and diesel (to a lesser degree) at the national and state level have been rising over the last two months as crude oil prices increase. Typically fuel prices peak around June 1st then start to decline before briefly escalating again during August, but the pattern is different this year. During the last full week in June U.S. gasoline and diesel prices averaged \$3.70 and \$3.92 per gallon respectively. For the same period Washington state gasoline and diesel prices averaged \$3.98 and \$4.08 per gallon, an eight cent and four cent increase from the last week in May.

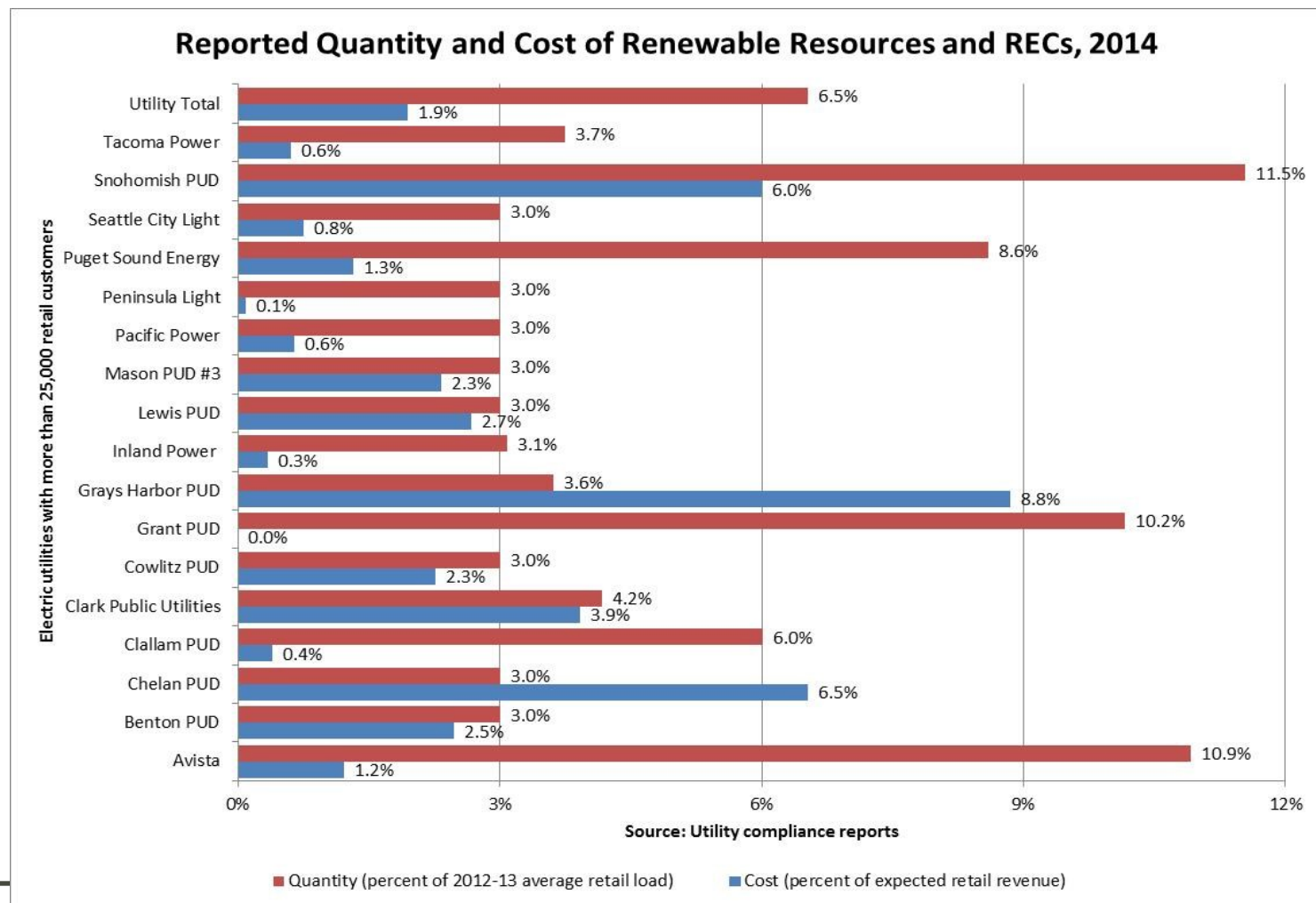
The price for month ahead NYMEX natural gas was virtually unchanged at \$4.49 per MMBtu as utilities rush to put gas in storage for next winter. Locally, natural gas spot average price at Kingsgate was \$4.45 per MMBtu, up 16 cents for the month. The EIA reported that natural gas storage increased a substantial 110 billion cubic feet to 1829 Bcf for the week ending June 20. The national gas storage level is now 31 percent below its 5-year average, and in the West we are 24 percent below our 5 year average. The gas storage refill season has been very robust the result of national gas storage being 50 percent below the 5-yr average at the end of April. The Dept. of Energy is forecasting that national storage will be a bit on the low side by the end of Oct. : 43 days of supply from gas storage versus the typical 50 days.

Electricity prices at the Mid C are nearly the same, averaging \$34.6 per megawatt-hr during June. Hydropower generation has been plentiful during May and June and exports to California are above normal.

<b>Energy Price Summary</b>	<b>Current</b>	<b>Month Ago</b>	<b>Year Ago</b>
Monthly Range at Mid-C (Peak: \$ per MWh)	25.8-43	17.2-61	24-42
Average Mid C price (Peak hours \$ MWh)	34.6	35.5	33.4
Electricity WA Retail: Apr. (cents/kWh)	7.17	7.38	7.01
Natural gas Kingsgate spot price (next day: \$ per million BTU)	4.37	4.27	3.43
Natural gas Sumas futures price (next month \$ per million BTU)	4.27	4.16	3.77
Natural gas Sumas monthly average: Apr. (\$ per million BTU))	NA	5.39	3.91
Natural gas H.H. futures (NYMEX next month: \$ per million BTU)	4.49	4.50	3.86
E85 (national average: \$ per gallon gasoline)	3.90	3.98	3.88
Ethanol (CBT next month contract: \$ per gallon)	2.01	2.38	2.45
Corn (CBT next month contract: \$ per bushel)	4.40	4.69	5.45
Petroleum, West Texas Intermediate futures (\$ per barrel)	106.8	104.1	95.2
Seattle gasoline price (\$ per gallon)	4.05	4.01	3.83
Gasoline futures (NYMEX next month: \$ per gallon)	3.12	2.95	2.84
State diesel price (\$ per gallon)	4.08	4.04	3.98
Heating oil futures (NYMEX next month: \$ per gallon)	3.04	2.94	2.90
U.S. residential propane price report (reported Oct.-Mar.)	NA	NA	NA
<b>Clean Cities: Alternative Fuel Price Report, Apr. 2013</b>	<b>US Avg current</b>	<b>West Coast current qtr</b>	<b>West Coast last qtr avg</b>
Ethanol E85 (\$ per gas gallon equiv. )	4.81	5.09	4.55
Biodiesel B20 (\$ per diesel gallon equiv.)	4.09	4.20	4.15
Biodiesel B99-100 (\$ per diesel gallon equiv.)	4.65	4.95	4.99
Compressed Natural Gas (\$ per gas gallon equiv. )	2.15	2.36	2.33







## Energy Headlines - If you only have time to read a few articles—read these.

U.S. Unveils Sweeping Plan to Slash Power Plant Pollution. Reuters.

<http://news.yahoo.com/u-unveil-sweeping-rules-cut-power-plant-pollution-101054675--finance.html>

OR, WA on Path to Meet New Carbon Rules; Factors Outside Region May Cost Ratepayers. Oregonian.

[http://www.oregonlive.com/business/index.ssf/2014/06/oregon\\_washington\\_on\\_path\\_to\\_m.html](http://www.oregonlive.com/business/index.ssf/2014/06/oregon_washington_on_path_to_m.html)

Bipartisan report tallies high toll on economy from global warming. New York Times, June 24.

<http://www.nytimes.com/2014/06/24/science/report-tallies-toll-on-economy-from-global-warming.html?module=Search&mabReward=relbias%3Ar%2C%5B%22RI%3A5%22%2C%22RI%3A16%22%5D>

El Niño Could Bring Mild Pacific Northwest Winter. Vancouver Columbian.

<http://www.columbian.com/news/2014/jun/06/el-nino-could-bring-mild-nw-winter/>

Turbines to Be Replaced at Grant PUD's Priest Rapids Dam. Columbia Basin Herald.

[http://www.columbiabasinherald.com/news/article\\_de9769cc-eb37-11e3-a9dc-0019bb2963f4.html](http://www.columbiabasinherald.com/news/article_de9769cc-eb37-11e3-a9dc-0019bb2963f4.html)

North Dakota Oil Production Hits 1 Million Barrels a Day, Due Largely to Rich Bakken Formation. A.P.

<http://www.usnews.com/news/business/articles/2014/06/17/north-dakota-now-produces-1m-barrels-of-oil-a-day>

Op/Ed: On Biomass, EPA Should Follow the Science. The Hill, Washington.

<http://thehill.com/opinion/op-ed/209863-on-biomass-epa-should-follow-the-science>

## Energy Headlines—continued

### Clean Power Plan

Gov. Inslee Praises Obama Step on Reducing Coal-Plant Carbon Emissions. Bellingham Herald.  
<http://www.bellinghamherald.com/2014/06/02/3676409/gov-inslee-praises-obama-step.html>

Though Rebuked for Overreaching, the EPA Prevails Before the Supreme Court. Forbes Magazine.  
<http://www.forbes.com/sites/michaelbobelian/2014/06/24/though-rebuked-for-overreaching-the-epa-prevails-before-the-supreme-court/>

States Move to Blunt Obama Carbon Plan. Associated Press.  
<http://www.usnews.com/news/science/news/articles/2014/06/01/states-move-to-blunt-obama-carbon-plan>

Power Plant Rule a Tipping Point for Clean Energy Economy. Forbes Magazine.  
<http://www.forbes.com/sites/edfenergyexchange/2014/06/04/power-plant-rule-a-tipping-point-for-clean-energy-economy/>

Western Governors' Views on Proposed Power Plant Rules from EPA. Associated Press.  
<http://www.usnews.com/news/science/news/articles/2014/06/10/western-governors-views-on-proposed-epa-rules>

Vintage U-S Coal-Fired Power Plants Now an 'Aging Fleet of Clunkers'. Washington Post.  
[http://www.washingtonpost.com/business/economy/a-dilemma-with-aging-coal-plants-retire-them-or-restore-them/2014/06/13/8914780a-f00a-11e3-914c-1fbd0614e2d4\\_story.html](http://www.washingtonpost.com/business/economy/a-dilemma-with-aging-coal-plants-retire-them-or-restore-them/2014/06/13/8914780a-f00a-11e3-914c-1fbd0614e2d4_story.html)

### Oily stuff

Canada OKs "Northern Gateway" Oil Pipeline to the Pacific Coast. Associated Press.  
<http://abcnews.go.com/International/wireStory/canada-oks-oil-pipeline-pacific-coast-24183443>

Pressure on the Oil Megaprojects. New York Times, June 17.  
<http://www.nytimes.com/2014/06/18/business/energy-environment/18iht-ren-oil18.html?ref=energy-environment>

City of Vancouver Opposes Columbia River Oil Terminal Plan; Now What? Vancouver Columbian.  
<http://www.columbian.com/news/2014/jun/03/vancouver-opposes-oil-plan-now-what/>

New rail car standards anticipated for autumn. New York Times, June 24.  
<http://www.nytimes.com/2014/06/25/business/new-rail-car-standards-anticipated-for-autumn.html?ref=energy-environment>

Washington State Governor Issues Oil Train Directive. Vancouver Columbian.  
<http://www.columbian.com/news/2014/jun/12/inslee-issues-oil-train-directive/>

Scouring the world for shale-based energy. New York Times, June 17.  
<http://www.nytimes.com/2014/06/18/business/energy-environment/shale-investments-could-reshape-global-market.html?ref=energy-environment>

### Climate Change

Earth Has Its Warmest May on Record Globally, Spring Could Be Warmest. Mashable  
<http://mashable.com/2014/06/17/earth-warmest-may-spring/>

Money Men Tally Cost of Climate Change. Associated Press.  
<http://www.seattlepi.com/news/science/article/Money-men-tally-cost-of-climate-change-5574170.php>

Taking effective action against the unstoppable. New York Times, June 24.  
<http://www.nytimes.com/2014/06/25/business/economy/carbon-cuts-now-wont-stop-climate-change-but-could-limit-damage.html?ref=energy-environment>

## Recent Reports on Energy and Climate Change

Tesoro Savage Petroleum Terminal submission to the Energy Facility Siting Evaluation Council

<http://www.efsec.wa.gov/Tesoro-Savage.shtml>

<http://www.iea.org/publications/freepublications/publication/name,43771,en.html>

Fifth Assessment Report. Intergovernmental Panel on Climate Change (IPCC) 2013-14.

<http://www.ipcc.ch/>

First academic study released in EDF's groundbreaking methane emissions series. Environmental Defense Fund, Sept 2013.

<http://www.edf.org/media/first-academic-study-released-edf%E2%80%99s-groundbreaking-methane-emissions-series>

World Bank: 4 Degrees - Turn Down the Heat. Potsdam Institute for Climate Impact Research and Climate Analytics. June 2013. [http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729\\_20130614145941/Rendered/PDF/784240WP0FullI00D0CONF0to0June19090L.pdf](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729_20130614145941/Rendered/PDF/784240WP0FullI00D0CONF0to0June19090L.pdf)

[http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729\\_20130614145941/Rendered/PDF/784240WP0FullI00D0CONF0to0June19090L.pdf](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729_20130614145941/Rendered/PDF/784240WP0FullI00D0CONF0to0June19090L.pdf)

Long-term outlook for nuclear power depends on lifetime of plant, EIA, Apr. 2013

<http://www.eia.gov/todayinenergy/detail.cfm?id=10991>

Environmental Protection Agency 2012 Climate Change Indicators Report.

<http://www.epa.gov/climatechange/science/indicators/>

Report on the First Quadrennial Technology Review, US Dept. of Energy

<http://energy.gov/downloads/report-first-quadrennial-technology-review>

Understanding Household Preferences for Alternative- Fuel Vehicle Technologies. Mineta Transportation Institute.

<http://www.transweb.sjsu.edu/project/2809.html>

Redrawing the Energy-Climate Map. International Energy Agency, June 2013.

[http://www.iea.org/media/freepublications/executivesummary/WE02013\\_Climate\\_Excerpt\\_ES\\_WEB.pdf](http://www.iea.org/media/freepublications/executivesummary/WE02013_Climate_Excerpt_ES_WEB.pdf)

Natural Gas Weekly Update: <http://www.eia.gov/naturalgas/weekly/?src=Natural-b1>

Monthly Energy Review, EIA : <http://www.eia.gov/totalenergy/data/monthly/>

Short-term Energy Outlook, EIA : <http://www.eia.gov/forecasts/steo/>

This Week in Petroleum. EIA,: <http://www.eia.gov/oog/info/twip/twip.asp>

## River & Snow Pack Info

- Observed May stream flow at The Dalles: 121% of average.
- Observed May precipitation above The Dalles: 103% of average.
- Forecast runoff at The Dalles, May: 109.6 million acre-feet, 108% of 30-year average
- Forecast snowpack volume: May, 117% of average.
- Federal hydropower generation in Apr. : 10,750 aMW, 2009-2013 average: 9,876 aMW.
- Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak): Apr. 37%, 5-year average: 46%.

## Power Exchanged

Average flow of power during the last 30 days

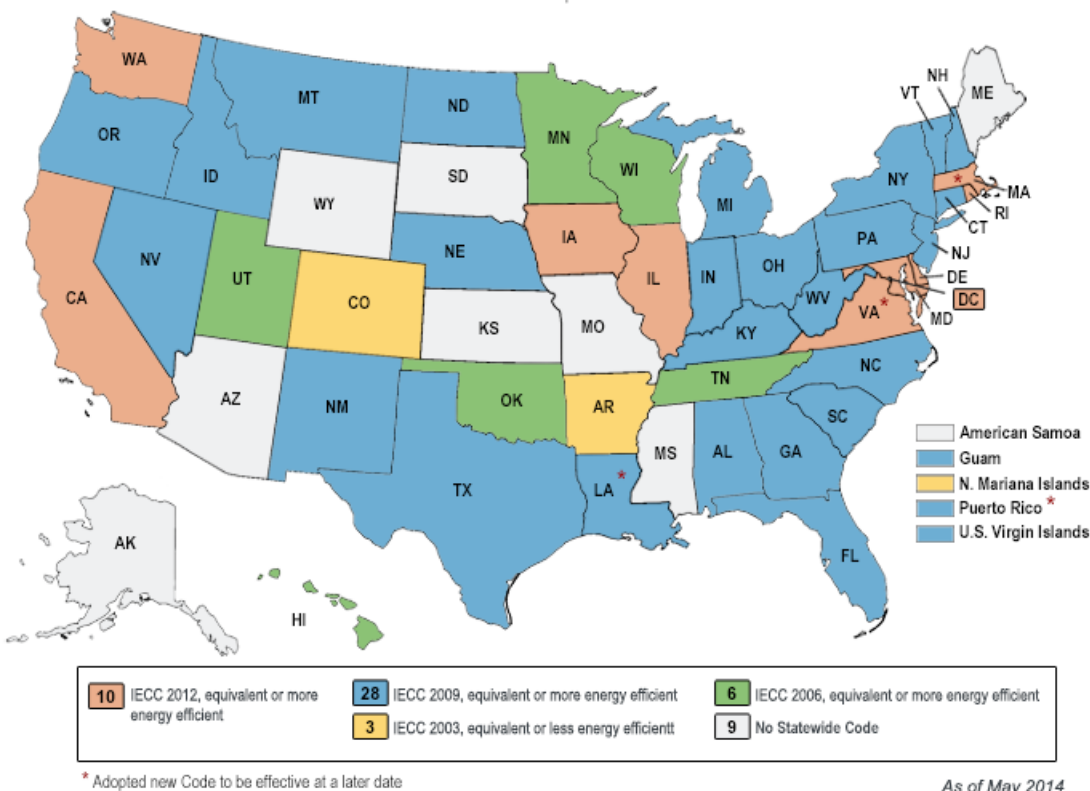
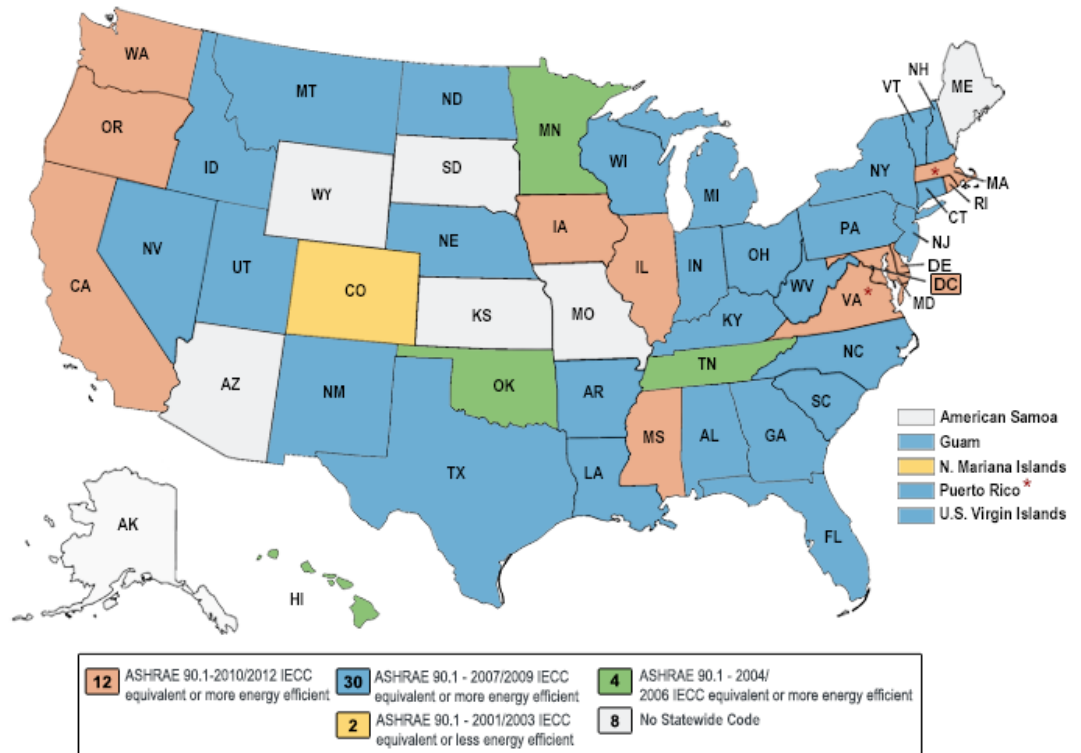
- California (exported to) 5956 MW
- Canada (export to) 348 MW
- Net power exported: 6304 MW



## Current State Building Energy Codes

Energy cost savings for Washington resulting from the state updating it's commercial and residential building energy codes are estimated to be nearly \$380 million annually by 2030.

(information from US EERE)



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